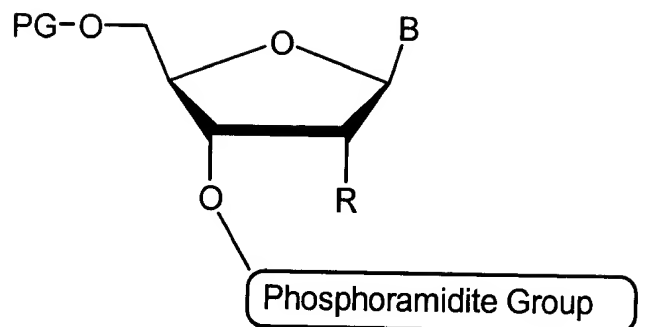


In the Claims

Please amend Claims 3, 5 and 17. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i-ii).

3. (Twice Amended) A method in accordance with claim 2, wherein said synthesizing comprises the sequential steps of:
- a) removing a photoremovable protecting group from at least a first area of a surface of a substrate, said surface comprising immobilized nucleotides on said surface, said nucleotides capped with a photoremovable protecting group, without removing a photoremovable protecting group from at least a second area of said surface;
 - b) simultaneously contacting said first area and said second area of said surface with a first nucleotide to couple said first nucleotide to said immobilized nucleotides in said first area, and not in said second area, said first nucleotide capped with said photoremovable protecting group;
 - c) removing a photoremovable protecting group from at least a part of said first area of said surface and at least a part of said second area;
 - d) simultaneously contacting said first area and said second area of said surface with a second nucleotide to couple said second nucleotide to said immobilized nucleotides in at least a part of said first area and at least a part of said second area;
 - e) performing additional removing and nucleotide contacting and coupling steps so that a matrix array of at least 100 nucleic acids having different sequences is formed on said support;
- with the proviso that the coupling steps further comprise oxidizing an initially formed phosphite ester linkage to a phosphate ester linkage using from about 0.005 M to about 0.05 M iodine in an aqueous solvent mixture.
5. (Twice Amended) A method in accordance with Claim 3, wherein said nucleotides have the formula:



wherein

B is a member selected from the group consisting of natural or unnatural adenine, natural or unnatural guanine, natural or unnatural thymine, natural or unnatural cytosine, and natural or unnatural uracil;

R is a member selected from the group consisting of hydrogen, hydroxy, protected hydroxy, halogen and alkoxy; and

PG is a photoremovable protecting group.

17. (Amended) A method in accordance with Claim 5, wherein B is selected from the group consisting of adenine, guanine, cytosine and thymine, R is hydrogen, PG is MeNPOC, the phosphoramidite group is $-P(OCH_2CH_2CN)N(iPr)_2$ and said solution is about 0.02 M iodine in a mixture of water, pyridine and THF.

REMARKS

Claim Amendments

Claim 3 has been amended to correct typographical errors and to have consistent terminology.

Claim 5 has been amended to label the group formerly designated "PR" directly as a phosphoramidite group.

Claim 5 has additionally been amended for consistency of language and to correct a typographical error.

Claim 17 has been amended in accordance with Claim 5, such that the group designated "P" is now a phosphoramidite group.

No new matter has been added.